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ABSTRACT OF THE DISCLOSURE

Fast and efficient data compression can be carried out. Original image data are subjected to wavelet transform. The obtained wavelet-transformed data are classified and bit allocation is determined. Based on the determined bit allocation, the wavelet-transformed data are quantized and quantized data are obtained. The quantized data are classified into 0 data and non-zero data. Binary classification information data indicating this classification are also obtained. The classification information data are coded according to a coding method having a comparatively simple operation, such as Huffman coding and run length coding. The multi-valued, non-zero data are coded according to a coding method having a high compression efficiency although having a comparatively complex operation, such as universal coding and Golomb-Rice coding.